Hong Kong - The probabilities of a major osteoporotic fracture in women

The following tables give the 10-year probability (%) of a major osteoporotic fracture (hip, clinical spine, forearm or proximal humerus fracture) according to body mass index (BMI kg/m2), the number of clinical risk factors (CRF) and age. Each table provides a mean estimate and a range, based on the epidemiology of Hong Kong. The range is not a confidence interval, but because the weight of different risk factors varies, is a true range.

Age = 50 years

Number of CRFs	BMI (kg/m²)						
	15	20	25	30	35	40	45
0	1.3	1.1	1.1	0.9	0.8	0.7	0.6
1	2.1 (1.4-3.2)	1.8 (1.2-2.6)	1.7 (1.1-2.4)	1.5 (1.0-2.0)	1.3 (0.9-1.8)	1.1 (0.8-1.5)	1.0 (0.7-1.3)
2	3.4 (1.9-5.7)	2.9 (1.6-4.9)	2.6 (1.4-4.6)	2.3 (1.2-4.0)	2.0 (1.0-3.5)	1.7 (0.9-3.0)	1.5 (0.8-2.7)
3	5.6 (2.8-9.6)	4.6 (2.2-8.2)	4.1 (1.9-7.5)	3.5 (1.7-6.5)	3.1 (1.4-5.7)	2.7 (1.3-5.0)	2.3 (1.1-4.3)
4	8.9 (4.8-14)	7.2 (3.9-12)	6.2 (3.3-10)	5.4 (2.8-8.9)	4.7 (2.4-7.8)	4.0 (2.1-6.8)	3.5 (1.8-5.9)
5	14 (8.4-18)	11 (6.9-14)	9.4 (6.2-13)	8.1 (5.3-11)	7.0 (4.6-9.4)	6.0 (4.0-8.2)	5.2 (3.5-7.1)
6	22	17	14	12	10	9.0	7.7

Ten year probability of osteoporotic fractures (%) according to BMI, the number of clinical risk factors (CRF) and age in women from Hong Kong.

Age = 55 years

Number of CRFs	BMI (kg/m²)						
	15	20	25	30	35	40	45
0	2.5	2.2	2.0	1.8	1.5	1.3	1.2
1	4.2 (3.0-6.1)	3.5 (2.5-5.0)	3.2 (2.2-4.4)	2.8 (1.9-3.8)	2.4 (1.6-3.3)	2.1 (1.4-2.8)	1.8 (1.2-2.5)
2	6.8 (3.9-11)	5.6 (3.1-9.0)	5.0 (2.7-8.2)	4.3 (2.3-7.2)	3.7 (2.0-6.3)	3.2 (1.7-5.5)	2.8 (1.5-4.8)
3	11 (5.9-18)	8.8 (4.5-15)	7.6 (3.8-13)	6.6 (3.3-12)	5.7 (2.8-10)	4.9 (2.4-9.0)	4.3 (2.1-7.8)
4	17 (9.6-25)	13 (7.9-21)	11 (6.5-18)	9.9 (5.6-16)	8.6 (4.8-14)	7.4 (4.1-12)	6.4 (3.5-11)
5	26 (17-32)	20 (14-26)	17 (12-22)	15 (10-19)	13 (8.8-17)	11 (7.6-15)	9.6 (6.6-13)
6	39	30	25	22	19	16	14

Age = 60 years

Number of CRFs	BMI (kg/m²)						
	15	20	25	30	35	40	45
0	4.6	3.9	3.5	3.0	2.6	2.3	2.0
1	7.5 (5.5-10)	6.2 (4.4-8.4)	5.4 (3.8-7.2)	4.7 (3.3-6.2)	4.1 (2.8-5.4)	3.5 (2.4-4.7)	3.1 (2.1-4.0)
2	12 (7.4-18)	9.7 (5.7-15)	8.4 (4.8-13)	7.2 (4.1-12)	6.2 (3.5-10)	5.4 (3.0-8.9)	4.7 (2.6-7.8)
3	19 (11-29)	15 (8.4-24)	13 (6.8-21)	11 (5.8-19)	9.5 (4.9-16)	8.2 (4.2-14)	7.1 (3.6-13)
4	29 (18-40)	22 (14-33)	19 (12-29)	16 (9.9-25)	14 (8.4-22)	12 (7.2-19)	11 (6.1-17)
5	42 (30-50)	33 (24-41)	27 (20-35)	24 (17-31)	21 (15-27)	18 (13-23)	15 (11-20)
6	58	47	39	34	30	26	22

Ten year probability of osteoporotic fractures (%) according to BMI, the number of clinical risk factors (CRF) and age in women from Hong Kong.

Age = 65 years

Number of CRFs	BMI (kg/m²)						
	15	**20**	**25**	**30**	**35**	**40**	**45**
0	8.2	6.7	5.8	5.0	4.3	3.7	3.2
1	13 (9.9-17)	10 (7.7-14)	9.0 (6.5-12)	7.7 (5.5-9.9)	6.7 (4.7-8.6)	5.8 (4.1-7.4)	5.0 (3.5-6.4)
2	20 (13-29)	16 (10-23)	14 (8.1-21)	12 (6.9-18)	10 (5.9-16)	8.7 (5.1-14)	7.6 (4.3-12)
3	30 (20-42)	24 (15-36)	20 (12-32)	17 (10-28)	15 (8.5-25)	13 (7.2-22)	11 (6.1-19)
4	43 (30-56)	35 (24-48)	29 (20-42)	25 (17-37)	22 (14-33)	19 (12-29)	17 (10-26)
5	59 (47-67)	49 (38-57)	41 (32-50)	36 (28-45)	31 (24-39)	27 (21-35)	24 (18-31)
6	74	64	55	49	43	38	33

Age = 70 years

Number of CRFs	BMI (kg/m²)						
	15	**20**	**25**	**30**	**35**	**40**	**45**
0	14	11	9.0	7.7	6.6	5.7	4.9
1	22 (17-26)	17 (13-20)	14 (10-17)	12 (8.7-15)	9.8 (7.4-12)	8.4 (6.3-11)	7.2 (5.4-9.2)
2	33 (23-43)	25 (17-33)	20 (13-27)	17 (11-24)	15 (9.4-20)	12 (8.0-17)	11 (6.8-15)
3	48 (35-62)	37 (26-51)	30 (19-42)	25 (16-37)	22 (14-32)	18 (12-28)	16 (9.7-24)
4	65 (53-77)	53 (42-67)	42 (32-57)	37 (27-50)	31 (23-44)	27 (19-38)	23 (16-33)
5	79 (74-85)	70 (63-78)	58 (51-67)	51 (44-60)	45 (38-53)	39 (32-47)	33 (27-41)
6	87	83	75	68	61	54	47

Ten year probability of osteoporotic fractures (%) according to BMI, the number of clinical risk factors (CRF) and age in women from Hong Kong.

Age = 75 years

Number of CRFs	BMI (kg/m²)						
	15	**20**	**25**	**30**	**35**	**40**	**45**
0	20	16	13	11	9.0	7.7	6.5
1	32 (25-45)	25 (19-33)	19 (15-24)	16 (12-20)	14 (10-16)	11 (8.6-14)	9.7 (7.3-12)
2	47 (33-64)	37 (25-51)	29 (19-39)	25 (16-33)	21 (13-28)	17 (11-23)	15 (9.4-19)
3	64 (48-78)	54 (37-70)	43 (28-59)	37 (24-51)	31 (20-44)	26 (17-38)	22 (14-32)
4	77 (64-86)	70 (55-83)	60 (44-74)	52 (38-67)	45 (32-60)	39 (27-52)	33 (23-45)
5	85 (78-89)	83 (72-88)	76 (64-84)	69 (57-78)	62 (50-71)	55 (43-64)	47 (37-56)
6	89	89	87	83	78	71	64

Age = 80 years

Number of CRFs	BMI (kg/m²)						
	15	**20**	**25**	**30**	**35**	**40**	**45**
0	26	22	18	15	13	11	9.3
1	38 (30-53)	32 (25-44)	27 (21-34)	23 (17-29)	19 (14-24)	16 (12-20)	14 (10-16)
2	52 (39-67)	45 (33-59)	39 (27-51)	33 (23-44)	28 (19-37)	23 (16-31)	20 (13-26)
3	65 (50-77)	59 (45-73)	53 (38-66)	46 (33-59)	39 (27-51)	33 (23-44)	28 (19-38)
4	75 (62-83)	72 (58-81)	67 (53-78)	60 (47-72)	53 (40-66)	46 (34-59)	40 (29-51)
5	82 (73-86)	81 (71-85)	78 (67-84)	73 (61-80)	67 (54-75)	60 (48-69)	53 (41-62)
6	85	86	85	82	78	72	66

FRAX® WHO Fracture Risk Assessment Tool

Ten year probability of osteoporotic fractures (%) according to BMI, the number of clinical risk factors (CRF) and age in women from Hong Kong.

Age = 85 years

Number of CRFs	BMI (kg/m²)						
	15	20	25	30	35	40	45
0	26	23	21	18	15	12	10
1	38 (29-53)	34 (26-45)	30 (23-38)	25 (19-32)	21 (16-27)	18 (13-22)	15 (11-18)
2	51 (38-67)	46 (33-61)	41 (29-53)	35 (24-45)	30 (20-39)	25 (17-33)	21 (14-28)
3	64 (50-76)	59 (45-72)	54 (41-67)	48 (35-60)	41 (29-53)	35 (24-46)	30 (20-39)
4	73 (61-81)	71 (58-80)	67 (54-77)	61 (47-72)	54 (41-66)	47 (35-59)	41 (29-52)
5	78 (72-81)	79 (70-83)	77 (67-83)	72 (61-79)	66 (54-74)	60 (48-69)	53 (42-62)
6	79	83	84	81	77	72	66

Age = 90 years

Number of CRFs	BMI (kg/m²)						
	15	20	25	30	35	40	45
0	18	16	15	13	11	8.8	7.4
1	27 (19-39)	24 (17-34)	22 (16-29)	18 (13-24)	15 (11-20)	13 (9.0-16)	10 (7.4-13)
2	37 (26-53)	34 (23-47)	31 (21-41)	26 (17-35)	22 (14-29)	18 (12-25)	15 (9.6-20)
3	49 (35-63)	46 (32-59)	42 (29-55)	36 (24-48)	30 (20-41)	25 (16-35)	21 (13-29)
4	60 (46-71)	58 (43-68)	54 (41-66)	48 (34-59)	41 (29-53)	35 (24-46)	29 (20-39)
5	68 (58-73)	68 (56-74)	66 (53-73)	59 (47-68)	53 (41-62)	46 (35-55)	40 (29-49)
6	71	74	74	70	64	58	51